

APPENDIX D

UTAH DIVISION OF WILDLIFE RESOURCES

NEW ZEALAND MUD SNAIL (*Urticomyces onopordorum*) MANAGEMENT PLAN

FOR LOA HATCHERY

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Utah State Fish Hatchery Status

The aquatic invasive species New Zealand Mud Snail (NZMS) was found in the main spring complex and throughout the outside cement rearing system at the Loa Hatchery in late November 2007. Springs providing water for the hatchery building and truck loading system have remained free of NZMS. The Loa Hatchery is owned and operated by the Utah Division of Wildlife Resources (Division).

Purpose

To develop a NZMS management plan that addresses both the short term and long-term direction for the Loa Hatchery.

Short Term strategy for decontamination of the existing trout stocks on station.

To determine extent of the NZMS infestation in fish groups at the Loa Hatchery, the staff sampled 100 fish from rearing units in the hatchery building and 100 fish from the large outside raceways. The stomachs and digestive tracts of each fish were physically examined for the presence of snails. Snails were to be identified as either an unknown native species or NZMS, but no snails were found in any of the fish sampled. These fish stocks will continue to be sampled at least quarterly until a determination is made as either stock canno be already containing NZMS or destroy the fish.

1. Protocols for stocking infected fish from the Loa Hatchery into NZMS infested waters:
 - a. A minimum of quarterly, sample 100 fish from the hatchery building and 100 fish from the outside raceway system to determine the presence of NZMS. Each fish's stomach and digestive tract will be examined for the presence of snails by lethal, ocular and microscopic inspection.
 - b. Fish scheduled for stocking will be placed in the raceway system that has been cleaned as follows:
 - i. Use a high-pressure hot water wash, spraying 140 degree F. water at a point 12 inches from the nozzle, to remove all sludge, vegetation, and snails, paying particular attention to screens, culverts, screen channels and backing boards.
 - ii. After pressure washing, spray the inside of the raceway with a quaternary ammonium compound that contains the active ingredient - Alkyl dimethyl benzyl ammonium chloride (ADBAC), at a concentration of 5.0%. Then, allow the raceway to stand for 48 hours, if possible.
 - iii. The cleaned and disinfected raceway will be filled with filtered water from the hatchery building water supply.